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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/761,514	01/16/2001	Steven D. Conover	1064-US	5648

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EXAMINER

KERNS, KEVIN P

ART UNIT PAPER NUMBER

1725

DATE MAILED: 04/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/761,514	CONOVER ET AL.	
	Examiner	Art Unit	
	Kevin P. Kerns	1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2004 and 08 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-48 are rejected under 35 U.S.C. 102(b) as being anticipated by Dudel et al. (DE 198 05 849 – English translation of the German document provided).

Dudel et al. disclose a method for constructing and connecting optical components, in which the process includes the following: providing an arrangement of a plurality of optical components or subassemblies 12 having predetermined optical properties (e.g. focal lengths) via solder or other thermal bonding material 21 (with solder pads/bumps 13b allowing for plastic deformation) on an optical bench (10,11) to form an optical train (for a total of 3 subassemblies aligned along axis z of Figure 2); positioning the components/subassemblies 12 with reference to laser light 18 (optical signal) transmitted through a lens 16 and through the optical components 12; and thereby providing further adjustment (precision placement) to the alignment of the components 12 of the optical train to achieve accuracy on the micron scale (abstract;

and Figures 1-8). The abstract, Figures, German text (see column 3, lines 17-43; column 4, lines 64-68; column 5, lines 1-68; and column 6, lines 1-20), and claim 1 of the translation set forth that the respective distances between the plurality of positions "p" (reference marks) in Figures 6 and 7 would be determined prior to the preliminary alignment and/or subsequent laser alignment steps, since the optical properties of the optical components are predetermined when placed on the optical bench to form the optical train, and such measurements between positions "p" would be advantageous for more rapidly achieving micron-scale alignment (abstract; column 3, lines 17-43; column 4, lines 64-68; column 5, lines 1-68; and column 6, lines 1-20).

Regarding the translation of the German document (applicants are referred to, in particular, pages 2 and 6-14, claims, and Figures 1-8), optical components are installed onto an optical bench to form an optical train (optical bank – page 7), positions of the optical components are measured (page 12 and claim 1), and alignment is conducted with a laser adjustment via a sensor system to determine the irradiation output, to detect maladjustment (misalignment) of optical components (claim 1 – see translation of German document).

3. Claims 1-48 are rejected under 35 U.S.C. 102(e) as being anticipated by Verdiell (US 6,207,950).

Verdiell discloses an optical electronic assembly having a flexure for maintaining alignment between optical elements, in which the optical assembly includes the following features and process steps to achieve optical component alignment:

providing/installing an arrangement of a plurality of optical components (comprising an optical train assembly) having predetermined optical properties (for example, lens 16 having a focal length and an optoelectronic element laser diode 18), and an optical element 22 attached to a flexure 24 (attached by soldering, brazing, or welding, for example, and providing a degree of plastic deformation) on a package 10 comprising a substrate 12 (optical bench) and a positioning floor 14 having reference marks for relative positioning of all components; vertically aligning (measuring) optical parts mounted on a raised platform 20 (attached as submounts by solder bonding, brazing, or thermal bonding) adjustable with respect to "pick and place" precision of less than one micron vertically, and within a few microns precision in the lateral and transverse dimensions; and achieving further alignment via adjusting of the laser diode 18 (to provide an optical signal) to an (additional) precision of better than 5 microns after positioning of the optical components (abstract; column 2, lines 54-67; column 3, lines 1-67; column 4, lines 1-21; column 5, lines 16-67; column 6, lines 1-67; column 7, lines 1-67; column 8, lines 1-29; and Figures 1-7).

Response to Arguments

4. The examiner acknowledges the applicants' response received by the USPTO on February 5, 2004 and their subsequent response with a complete listing of claims and claim status received on March 8, 2004. Upon further consideration, the prior rejections under 35 USC 112, 2nd paragraph have been withdrawn. The applicants have added new dependent claims 30-48, such that claims 1-48 are presently under consideration.

5. Applicants' arguments filed February 5, 2004 have been fully considered but they are not persuasive.

With regard to the applicants' remarks/arguments on pages 8-10, and in response to the applicants' remarks concerning the International Search Report and Information Disclosure Statement, it is noted that neither the paper file of the application (at the time of the prior office action mailing in August 2003) nor the current electronic application file shows that a complete translation of the German document DE 198 05 849 was submitted by the applicants, which indicates that it may have been lost.

However, a complete translation from the USPTO translation services was obtained by the examiner later in August 2003. Upon review of the translation of the German document, the prior rejections under 35 USC 103(a) have been changed to 35 USC 102(b), as this document clearly discloses a "measuring" step.

Regarding the applicants' arguments against the prior art rejections, the examiner respectfully disagrees with the applicants' numerous assertions on pages 8-10 that the process steps are to be taken in view of the terms "followed by", "sequence", and "then" since the claimed steps (which have "comprising" language and lack these "sequential" terms and others such as "subsequently", "thereafter" etc.) are not required to be taken in any particular order when considering the prior art (although the German reference does, in fact, have this sequential order – see claim 1 of the German document, in particular). It is also noted that new dependent claims 30-48 show parallelism to many of the dependent claims 2-27, such that claims 30-48 are also

rejected for the same reasons as many of the claims 2-27, with the only difference being that they are dependent from claim 29 (having somewhat narrower claim limitations).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kevin P. Kerns whose telephone number is (571) 272-1178. The examiner can normally be reached on Monday-Friday from 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin P. Kerns *Kevin Kerns* 4/1/04
Examiner
Art Unit 1725

KPK
kpk
April 1, 2004